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PSYCHOLOGY AND SOCIAL SCIENCE

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Much has been written in the last two years of the necessity of mobilization for an organized attack on scientific and industrial problems. Natural scientist and economist are being pressed into service as never before. But there seems little recognition of the fact that industrial and economic problems are but fragments of the whole problem of human life; that, important as their solution is, it is but a means to an end of improving the general social relationships of man with man. As Ellwood¹ has said, there is really only one social problem, that of "the relationships of men to one another." Problems of labor and the rest are but phases that can never be satisfactorily treated so long as they are seen as isolated. Western civilization, that had been welded by the advances of natural science into what Wallas has called "the Great Society," failed throughout the whole of the era which has now closed to recognize this fact. Its record of social failures is as impressive as its record of scientific success. Of the social sciences, economics alone has impressed itself on the "men of light and leading" to whom its destinies have been committed. With most men of affairs, it still seems an accepted doctrine that the remedies for all social ills are economic. The "economic man," though officially as dead as the faculty psychology, is still in reality just about as much alive. The idea that the advances of natural science would automatically bring about a solution of all social problems has for some time ceased to appeal to the more intelligent of men; but in advancing beyond it, the prevalence of economic interpretation has resulted in a social attitude which is both one-sided and dangerous.

There have not, indeed, been wanting of late years signs of increasing realization in many quarters that social problems must be more widely conceived if they were to be adequately understood—and that the task of understanding was yearly becoming one of more pressing moment.

"Throughout the politics and literature of the twentieth century," wrote Graham Wallas in 1914, "one traces this

¹ Ellwood, C. A. The Social Problem. N. Y., Macmillan, 1915.

fear, conscious or half-conscious, lest the civilization which we have adopted so rapidly and with so little forethought may prove unable to secure either a harmonious life for its members or even its own stability. The old delight in the 'manifest finger of destiny' and 'the tide of progress,' even the newer belief in the effortless 'evolution' of social institutions are gone. We are afraid of the blind forces to which we used so willingly to surrender ourselves. We feel that we must reconsider the basis of our organized life because, without reconsideration, we have no chance of controlling it. And so behind the momentary ingenuities and party phrases of our statesmen we can detect the straining effort to comprehend while there is yet time. Our philosophers are toiling to refashion for the purposes of social life the systems they used so confidently to offer guidance for individual conduct. Our poets and playwrights and novelists are revolutionizing their art in the attempt to bring the essential facts of the Great Society within its range."2

Social phenomena can be controlled only as they are understood, not by hasty and sentimental attacks upon them. There is no place in the social programs of the future for Mr. Wells' "Gawdsaker." Organized attempts at control there must be, if national rivalry and class discontent are not to be more bitter in the future than ever before; but such attempts must be broadly conceived and must base on a knowledge of the facts about the behavior of men in their social relationships. Every scrap of available knowledge of human behavior that bears on men's relations with each other must be utilized. Here is the greatest task and the greatest opportunity of applied psychology. Psychology needs to put itself to work not only as a series of isolated techniques but as an instrument for the understanding and control of social conduct.

The relations which have existed between psychology and the social sciences have been for the most part quite unsatisfactory. The majority of students of social phenomena, wher they begin to psychologize, do so in terms that seem to the psychologist both naïve and antiquated. It is perhaps hardly fair to single out among so much bad psychology one case for illustrative purposes, but the point will be the better for concreteness. A text on sociology published within the last year devotes a chapter to the subject of "social laws."

² Wallas, Graham. The Great Society. N. Y., Macmillan, 1914,

p. 14.

⁸ Blackmar, F. W., and Gillin, J. L. Outlines of Sociology. N. Y., Macmillan, 1915.

After a preliminary warning to the effect that social laws are less exact than those of physics, "for, since human beings possess thought and will, their actions are not so definitely determined as those of atoms," the authors state and discuss some eighteen laws of social action formulated by various The collection is to the psychologist an interesting one. He is met at the outset by the law that "each individual seeks the largest return for the least sacrifice." The explanation follows that "whether we consider wealth getting or wealth using, religion or art, culture or learning, or, indeed, life in any of its various important phases, the individual is seeking his highest good or best interests so far as his powers or capacities will permit." The man who always seeks "his highest good or his best interests" is a creature more familiar to the economics of the nineteenth century than to the psychology of the twentieth. Sundry chapters on habit, instinct, and emotion have disposed of him in psychology, but, it seems, not in sociology. The "law" is only true when it is taken in a sense quite other than that of the authors—let us say, with Thorndike, that the individual seeks satisfying situations and avoids annoying situations, and that there is no necessary correlation between such situations and "highest good," or "best interests." And, even then, the problem is simply stated—Thorndike has devoted a volume to a preliminary attempt at the outlines of its solution.

Again, we meet the law that "the greatest good to the greatest number, or social well-being, is the aim of social action." This may well be true, but in what other department of knowledge claiming to be scientific is a statement of purpose regarded as a law? Throughout the whole section, the laws which are cited are for the most part mere unanalyzed statements, often so vague as to be meaningless. Consider, for example, the law that "in the absence of interferences, imitation spreads in geometrical progression." Psychology has had a deal to say of imitation in the last few years—Tarde seems, however, not yet fully disposed of.

Consider again these two laws: "Each individual has a schedule of choices ranging from the most desirable objects to the least desirable" and "Individual minds respond similarly to the same or like stimuli." Immediately afterward comes this statement regarding the latter law: "It must not be carried too much into detail, or it will conflict with the one previously stated" (the individual schedule of choices). It seems impossible to interpret the two laws together in any other way than by some such statement as that "people value

things differently, so that they don't always behave in the same fashion, but sometimes they do." The latter law, we are further told, is "a well-established principle."

But by this time one is willing to admit all the authors say—and more—with regard to the inexactness of such social laws. What McDougall wrote a few years ago of the attitude of students of the social sciences will bear repetition—"some do lip service to psychology, but in practice ignore it, and will sit down to write a treatise on morals or economics, or any other of the social sciences, cheerfully confessing that they know nothing of psychology. A certain number, perhaps the majority, of recent writers on social topics are content to take as their psychological foundation the vague and extremely misleading psychology embodied in common speech, with the addition of a few hasty assumptions about the mind made to suit their particular purposes."

The realization that psychology should play more than a subordinate rôle in social science is, indeed, surprisingly recent. It was as late as 1908 that Ross could excuse his trepidation in putting out his book on the ground that it was "the first treatise, in any language, professing to deal systematically with the subject of social psychology." As for the psychologists von Fach who have made extended contributions to social interpretation, they can be counted on the

fingers of a hand.

Much of what the social sciences have been doing is, indeed, scientific only in name. Instead of beginning with the study of human behavior in its social aspects and proceeding to utilize the facts thus derived to further understanding, the social sciences have too often attempted to arrive at their conclusions by adopting at the start a set of theories as to what society was about, and then amassing facts to show that the social process was really what, on other grounds, they were already convinced that it ought to be.

It has been said of Spencer, for example, that "he was already charged with political preconceptions when he approached science, and he sought to find in science examples or analogies to point a moral already drawn and adorn a tale whose plot was already sketched." To Spencer, indeed, the scientific treatment of social problems meant, not so much

⁴ McDougall, Wm. An introduction to Social Psychology. Boston, 1909, 2d edition.

⁵ Ross, G. A. Social Psychology. N. Y., Macmillan, 1908. ⁶ Barker, Ernest. Political Thought from Herbert Spencer to the Present Day. Holt, New York, 1915, p. 85.

their treatment by scientific method, as the application to human society of the facts and theories of biology. It was an extension of the content, not the method, of natural science

to human affairs, that engaged his attention.

Spencer is not the only student of social science to fall under the spell of the biological analogy. But even those who have been most convinced of the correctness of such an approach are far from satisfied with the results which it has so far yielded. Just at present, this dissatisfaction expresses itself by a more insistent effort to get at the correct biological premises, to abandon Spencer in favor of Darwin. Two books, published in the last year or two, may serve to illus-

trate what is happening.

The author of the first of the two begins by expressing the conviction that the biological interpretation of society rests not on an analogy, but on a real identity. The difficulty is that our social thinking has been dominated by the philosophy of Spencer instead of the science of Darwin; let us therefore go to the real facts. But, he goes on to say, we must not go to the "Descent of Man," in which Darwin has sketched his own social applications, for in these chapters Darwin has for some reason "been led to assay waters beyond his depth." He continues: "This part of the 'Descent' had better have been left unwritten, for, in default of the usual mountains of data from which he was wont to draw his weighty inductions the great scientist was led to wander hopelessly among the unfamiliar and unfathomable quicksands of the metaphysical and intuitional. In so doing he presents but a sorry spectacle to his admirers."

The author of the most recent of the biological attempts⁸ also deplores the influence of the metaphysics of Comte and Spencer. He too, will return to Darwin and re-examine the facts. Above all, let us go to the "Descent," for there we find, sketched by Darwin himself, a theory of social progress which furnishes "the clear guiding principle which seems to offer for the social sciences, something of the vitalizing organization and system which the discovery of the Newtonian law of gravitation gave to the physical sciences in the seventeeth century."

It is needless to say that the two men come to quite different conclusions. The biological analogy, indeed, may lead to as many systems as there are human temperaments on which to

 ⁷ Keller, A. G. Societal Evolution. New York, Macmillan, 1915.
 ⁸ Nasmyth, George. Social Progress and the Darwinian Theory.
 N. Y., 1916.

base them. The method is not that of science, but of speculation.

This naturally does not mean that biology has nothing to do with social affairs. It does mean that the assistance rendered by biology to the study of social phenomena cannot take the form of setting up an *a priori* set of categories into which the facts must be fitted.

Those who have looked to economics for an explanation of social phenomena of all sorts have been guilty of a somewhat similar error. "It is probably safe to say," writes Carver, "that the economist is the only one of the various students of society who has accomplished much in the way of perfecting his analysis. On the purely economic side of social life considerable progress has been made in this direction, and it therefore seems probable that the method of sociology will be an expansion of the method of economics. However, the chief danger is that if sociology is to be developed from the economic standpoint, and by an expansion of the method of economics, the purely economic factors will be overemphasized."

It would seem, however, that just as in the case of biology, it is not so much an extension of the method of economics as of its content, to the field of society, that is to be feared. For a variety of reasons, the economist has been able to make use of the methods of science in general in his own field more than have students of the related disciplines. To say that the method of economics may prevail in the social sciences is just to say that they will become more scientific; to say that its content may shape social thinking as a whole, on the other hand, means that the whole is seen in terms of one of its parts. It is in the latter sense that economics has influenced many thinkers—Marx and the adherents of the doctrine of economic determinism generally are of course classical examples.

Many economists, far from insisting that their formulations offer all-sufficing explanations, have seen clearly enough that, even within the territory of their science itself, problems arise that cannot be settled in solely economic terms. It is sufficient to recall the vexed question of value. A growth of scientific habits of thought in this discipline that might well be emulated by others of the social sciences is evidenced when one compares the broad lines of treatment of this particular problem by, for example, the modern Austrian economists with the mid-century dogmatism of John Stuart Mill.

⁹ Carver, T. N. Sociology and Social Progress. Boston, Ginn, 1905, pp. 2-3.

"Happily," he wrote, "there is nothing in the laws of value which remains for the present or any future writer to clear up; the theory of the subject is complete: the only difficulty to be overcome is that of so stating it as to solve by anticipation the chief perplexities which occur in applying it; and to do this, some minuteness of exposition, and considerable demands on the patience of the reader, are unavoidable."

This propensity to explain all social phenomena by utilizing the data of some one science has expressed itself in still other forms. The title of Bagehot's "Physics and Politics" is sufficient indication of still another tendency, while others have followed in the footsteps of Buckle, and found their

talisman even more than he in geographic influences.

Least scientific of all, perhaps, are those views which find the key to the understanding of social processes in the concept of society as an organism. Since the time of Hobbes, many thinkers have succumbed to the attractive analogy; some stating its implications in metaphysical terms, others, like Spencer, coming to the same result from their biological bias. How far such doctrines may go is shown by a writer like Lilienfeld, who begins by asserting that society is not merely like, it is, an organism. Its cells are the nervous systems of individual men, its tissues their class groupings. Environment furnishes the "social intercellular substance," government is the brain, while the superiority of the social organism lies in the fact that all its cells are nerve cells. Society, like other organisms, grows old, suffers disease and death.¹⁰

German social thought, with its distinction between the organized state and society, holds largely, so far as the former is concerned, to some form of the organic analogy; while that group of writers who, like LeBon, hold that even the temporary forms of human association bring into being some sort of over-consciousness, different as their conceptions may be in other respects, agree in attributing to society a sort of super-individuality in a fashion that recalls the scholastic realist.

What has been said in the preceding paragraphs is not in any sense to be regarded as an attempt to sketch the main tendencies in social thought; it is merely a series of illustra-

¹⁰ Von Lilienfeld, Paul. Gedanken über die Socialwissenschaft der Zukunft. 1873-1881. 5 vols. For a summary of the whole organic school, see Coker, F. W. Organismic Theories of the State. N. Y., Columbia University Studies in History, Economics, and Public Laws, Vol. 38, No. 2, 1910. The sketch of Lilienfeld's views above is summarized from this monograph.

tions of the fact that preconceived systems, one-sided theories, schools of thought, have tended in social science to take the place of an unbiased study of phenomena. The student of social problems, as has been said above, has too often failed to make the distinction between appropriating the method of science and appropriating its data. He has forgotten that, while the method of science is the same in all departments, the data of particular sciences cannot forthwith be transferred to the problems that arise in other fields. Not all students of society, to be sure, have been so wanting; especially of late years there has been a growing realization of the inadequacy of such methods of attack. And the psychologist may well remember that it is not so long ago that psychology, with the theories of the association school, was dominated by the same tendency toward direct application of the subject-matter of an alien science to its own domain. The attempt to apply the content of mechanics to psychology failed, just as corresponding attempts in the social sciences have failed.

The difficulty which the social sciences have encountered with their method is one which meets the student of human behavior in any field. Natural science has succeeded after three centuries of effort in establishing in its own field a particular method of viewing natural phenomena. But so foreign to the mind of the race are scientific habits of thought, that their extension to human nature still meets with active re-

sistance.

The scientific viewpoint means, fundamentally, two things. It means that the order of phenomena dealt with must be regarded as uniform, and that facts and those statements of uniformity which make up the laws of science are discoverable only by properly controlled methods of observation, comparison and experiment.

The belief that the order of nature is uniform means to the scientist that the march of material events is not upset by the capricious irruption of external immaterial agencies. The opposite belief, we have come to see, is the essence of

the older world-view of animism.

Many social writers are frankly animists; they regard social phenomena as incapable of exact analysis just because they are to some extent capricious. Pleasure, or pain, or reason, forces quite outside the material chain of events, are conceived as entering somehow to modify their nature. Some are indeed quite willing to admit that the activities of a society as a whole are uniform, if only the group is large enough, but seem to speak as though this uniformity were the result

of the mutual cancellation of many capricious individual activities. Writers on ethics still double and twist to assure on the one hand a fair amount of determinism and to save, on the other, the "freedom of the will." Legal doctrines of responsibility still rest on views of human nature that are noth-

ing short of archaic.

The psychologist has cast off the cruder forms of animism, but even here its more subtle forms are still prevalent to a surprising degree. For to suppose that a nervous system which is a material mechanism developed by natural forces, is at times set in activity by psychic forces of any sort, which interrupt the orderly course of material phenomena, is to assert the very view against which science has been forced to struggle in one field after another. Yet such a defense of animism as McDougall has given us is not an isolated phenomenon.

In Ladd and Woodworth's "Elements of Physiological Psychology," the point of view is frankly animistic, and that not only in the final section of the book. In the midst of a discussion on "The Nervous Mechanism," for example, we are told that "The molecules of its central organs are capable of assuming inconceivably varied relations to each other, of thus transmitting and redistributing the nerve commotions which reach them along the incoming tracts, and even (it would seem) of starting automatically outgoing disturbances in response to self-conscious sensations and ideas." In his recently published text, Pillsbury too comes out frankly for animism, only cautioning that for the avoidance of vagueness it is best to "assume as little interaction between the series as is possible."

The functionalist has been in this regard the chief of sinners. Watson has said of him that he "actually thinks in terms of interaction and resorts to parallelism only when forced to give expression to his views." Many of his statements seem indeed capable of no other interpretation.

Such a psychology is exactly in the position in which physics was put by the famous statement that water rises in a tube from which the air has been exhausted because "nature abhors a vacuum." Such a physics believed firmly enough that the simpler cases of the behavior of water could be dealt with by scientific methods, but that when the cir-

¹¹ P. 283. Italics mine.

 ¹² Pillsbury, W. B. Fundamentals of Psychology. N. Y., Macmillan, 1916, pp. 92-97.
 13 Watson, J. B. Psychology and Behavior. Psy. Rev. 20, 1913, 158.

cumstances became more complicated, it was necessary to suppose the intervention of a Nature-spirit whose whim it was to interfere with the uniformity of natural events because of its abhorrence of the state of affairs that would otherwise be produced. Science for the simple, animism for the complex; such in a word is the meaning of this explanation.

In precisely the same fashion, we make a distinction between the simpler and the more complicated cases of human behavior. We speak of reflexes in terms of muscles that contract and glands that secrete because a nervous system of a definite character has been excited by such and such external stimuli. The whole chain of events is uniform, it is matter for scientific investigation, it is made up of material factors which culminate in the functioning of the material structures of muscle and gland. But complicate the issue and we fly, as did physics, to the arms of animism. It is "idea" and "impulse" that determine the material changes in muscle and gland,—a spirit called "anger" that makes us flush and grow pale.

So long as the psychological problems which one sets himself have little to do with every-day human affairs, such an insistence on adherence to scientific doctrine throughout may seem of merely academic importance. But for one who is interested in putting psychology to work, the question as to whether he shall proceed as a scientist or as an animist becomes of large significance. For the easy assumption that psychic forces do function serves to stop investigation at the points where it most needs to be pressed.

One illustration will suffice. McDougall says, in effect, that meaning has no physiological explanation. There is no need to attempt to understand what complicated neural commotions may underly it—there are none. Such doctrine means that the psychiatrist, for example, who is interested in discovering and altering the "setting" of a patient's ideas, need never hope to hit upon any neural basis for his work. Therefore let him turn to vague notions of subliminal forces, subconscious selves, which end only in confusion. Psychology interpreted in such fashion only confounds the chaos that has so long held conceptions of the abnormal, and from which it is just beginning here and there to emerge.¹⁴

It is hardly to be expected that social science should have shown more respect for the uniformity of behavior in the group than has psychology in the individual. But the failure

¹⁴ See in this connection Watson, J. B. Behavior and the Concept of Mental Diseases. Jour. of Phil. Psy., etc., 13, 1916, 589.

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to analyse successfully social phenomena which are regarded as capricious contrasts sharply with the success of those sciences which have freed themselves throughout from animistic ideas. It would seem time that another method was attempted in the social analysis; and it can hardly hope for acceptance in the social field while the spirit of animism still rules in psychology.

Among the psychologists, it is those who represent the movement toward behaviorism who seem most clearly to have grasped the importance of a thorough-going scientific attitude. It is, accordingly, to this quarter that one looks most confidently in considering the future relations between psychology and the social sciences, and this not alone because the behavorist is stressing the uniformity of behavior; the shift of emphasis for which he stands is such as to give the social sciences a psychological basis of a character which they have hitherto lacked.

So long as psychology thought of itself as the science of consciousness, it found itself in a curious dilemma which has many times been described. For either it must, if it were to be consistent, adhere to the scientific viewpoint, and refuse to let the very mental states which it set itself to describe play any part in human affairs, or it must lapse into animism. It is not a matter of chance that just those psychologists who have been most interested in putting their science to work have been, for the most part, those who leaned most strongly toward animism. Fortunately, psychology has not taken its self-imposed limitations too seriously, though as long as consciousness held the center of the stage, too many psychologists failed to be interested in anything that fell outside the domain of possible introspection.

The movement toward behavior, on the other hand, has not been devoid of extravagance. Those who, with Watson, hold that conscious states should be disregarded altogether seem to overestimate the possibility of getting an adequate picture of the more complicated sorts of cortical functioning through the study of the muscle-gland responses which are connected with them. McComas, in a recent article, 15 has shown convincingly the difficulty of supposing that each sort of stimulus arouses muscle-gland responses in patterns different from those resulting from any other sort of stimulus. It seems probable that the only adequate witness to much complicated functioning will always be found to be some form of intro-

¹⁵ McComas, H. C. Extravagance in the Motor Theories of Consciousness. Psy. Rev. 23, 1916, 397.

spection; that conscious states must always be studied, though, not indeed, as ends in themselves.

The essence of the behavior movement, shorn of such extreme views, seems rather to be the statement of psychology in terms of situation and response. The organism is always doing something, in response to situations that involve both the environment and its own physiological states, as depending both on its original "action system" and its acquired modifications. What it does is, so far as psychology is concerned, and in the higher types of organism, a matter of the passage of impulses to effector organs, and also to those portions of the nervous system which, when stimulated, respond by the appearance of mental states of various forms. The mental state is as real a form of response as is the change in effectors—the probability is, as already mentioned, that the type of response that involves the cortex and the consequent appearance of the mental state need not always be accompanied by, or at least not be adequately portrayed by, the effector changes.

But whether the response is accompanied by the appearance of a mental state or not is, to the behaviorist, incidental. He is interested in the response as response, not because it is or is not accompanied by consciousness. If consciousness appears, it is certainly the task of psychology to incorporate its description in any complete account of the response, and to make that description as adequate as possible. But if the conscious state does not appear, the study of the response is none the less not only "of interest to psychology," it is psychology. Introspection is thus one method, but not the method, of psychological investigation.

The advantages of such a position are many; not least is the fact that behavior, so concerned, holds out hope of a synthesis acceptable to all the jarring psychological sects—save perhaps those made up of philosophers in disguise. Genetic, abnormal, applied psychology, doctrines of the subconscious, the Freudian mechanisms, would all seem capable of statement in its terms.

That the student of social affairs will find it more to his liking and profit than the traditional views seems sure. Indeed, such a psychology seems to hold out the only hope of a scientific social analysis. Sumner's stimulating conception of the "mores," for example, is easily capable of restatement in its terms; questions as to the part played by "reason" in society take on a quite different character when one comes to think of reasoning as a sort of response involving a high degree of analysis of a problem-situation. Instead of vague

discussion of pleasure and pain as social forces, conceptions of satisfying and annoying situations such as Thorndike has reached, with the many lines of investigation which they open up; instead of concepts of instinct and emotion as terms which explain social behavior, the realization that they are but convenient classifications of various types of response. Such illustrations, chosen at random, may serve to show something of the advantages to social science of a psychology of behavior, a psychology which is both scientific and usable.

The argument of the preceding pages is, in brief recapitulation, that the social sciences have often failed to distinguish between the method and the content of science, with the result that the term "social science," as used by many writers, is a misnomer. To be scientific, students of social problems need to base their work not on the laws of biology or economics, but on the laws of human behavior. And, further, human behavior throughout its whole extent must be conceived in scientific terms; as uniform and as discoverable only by adequately controlled investigation. That the relations between the social sciences and psychology which furnishes the material for the study of behavior, have not been closer, is deplorable, but psychology has often failed to be usable when it was scientific, or scientific when it was usable. The social sciences can, however, look with more confidence to a psychology that states its problems in terms of situation and response than to that which was occupied too exclusively with consciousness.

It remains to be seen whether the more intricate sorts of social phenomena are too complex to yield to control even after considerable progress in their scientific analysis is made. But one who considers the immense increase in control over natural phenomena which has resulted from the analyses of natural science can but take an optimistic attitude toward this most important of all problems. Just as in natural science it is the attempt to understand nature apart from immediate practical considerations which has resulted in control almost as a by-product, it would seem that the way to "apply" psychology to the social field is not primarily to set it to work to devise immature methods of immediate social control, but to utilize it as an instrument which shall make possible a more complete social analysis, and trust that, as in the natural sciences, control will follow inevitably in its own good time. This is not doctrine acceptable to the reformer in haste, but it is consistent with the whole history of science. Even a generation of work by scientific methods may bring our analysis to a state from which a surprising increase in control will follow.